

Quanterra Incorporated
5815 Middlebrook Pike
Knoxville, Tennessee 37921

423 588-6401 Telephone
423 584-4315 Fax

RECEIVED
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EDMC

Quanterra

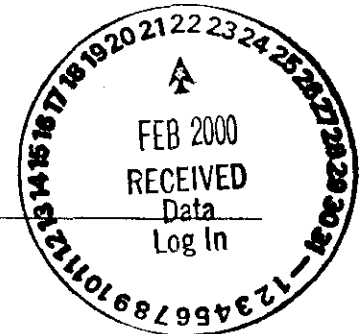
0052809

CERTIFICATE OF ANALYSIS

Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

February 17, 2000

Attention: Keith Maki



SAF Number : B99-009
Date Samples Received : January 20, 2000
Number of Samples : Two (2)
Sample Type : Air
SDG Number : W03086
Data Deliverable : 45 Day Data Package

I. Introduction

Two (2) air samples were received on January 20, 2000 by the Quanterra Environmental Services Knoxville Laboratory (QESKL) for analysis. Upon receipt, the samples were assigned the following laboratory ID number to correspond with the Bechtel Hanford, Inc. (BHI) specific ID:

<u>QESKL ID#</u>	<u>BHI ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
D7LAK	BOXCN7	Air	01/20/00
D7LAL	BOXCN8	Air	01/20/00

II. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information and analytical results.

The requested analysis was:

Volatile Organics by TO-14

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III. Quality Control

The analytical results for the analysis performed includes a minimum of one Laboratory Control Sample (LCS).


Quality control sample results are reported in the same units as sample results.

IV. Comments

The original chain of custody documentation is included with this report.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

Reviewed and approved:


Jamie McKinney
Project Manager

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) AIR

Lab Sample ID:H0A200110 001

Method: EPA-19 TO-14

Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL

Date Received: 01/20/00

Work Order: D7LAK101

Date Extracted:01/31/00

Dilution factor: 2.02

Date Analyzed: 01/31/00

QC Batch: 0031472

Client Sample Id: BOXCN7

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	10	U
56-23-5	Carbon tetrachloride	0.84	
67-66-3	Chloroform	0.40	U
75-09-2	Methylene chloride	0.40	U
127-18-4	Tetrachloroethene	0.40	U
79-01-6	Trichloroethene	0.40	U
78-93-3	2-Butanone (MEK)	1.0	U

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) AIR

Lab Sample ID:H0A200110 002

Method: EPA-19 TO-14

Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL

Date Received: 01/20/00

Work Order: D7LAL101

Date Extracted:01/31/00

Dilution factor: 1887.7

Date Analyzed: 01/31/00

QC Batch: 0031472

Client Sample Id: BOXCN8

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) ppb(v)	Q
67-64-1	Acetone	9400	U
56-23-5	Carbon tetrachloride	18000	
67-66-3	Chloroform	380	U
75-09-2	Methylene chloride	380	U
127-18-4	Tetrachloroethene	380	U
79-01-6	Trichloroethene	380	U
78-93-3	2-Butanone (MEK)	940	U

BECHTEL HANFORD, INC.

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) AIR

Lab Sample ID:H0A200110 002

Method: EPA-19 TO-14

Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL

Date Received: 01/20/00

Work Order: D7LAL201

Date Extracted:02/01/00

Dilution factor: 1887.7

Date Analyzed: 02/01/00

QC Batch: 0032313

Client Sample Id: BOXCN8 -RE 1

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) ppb(v)	Q
67-64-1	Acetone	9400	U
56-23-5	Carbon tetrachloride	16000	
67-66-3	Chloroform	380	U
75-09-2	Methylene chloride	380	U
127-18-4	Tetrachloroethene	380	U
79-01-6	Trichloroethene	380	U
78-93-3	2-Butanone (MEK)	940	U

BECHTEL HANFORD, INC.
METHOD BLANK COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) AIR

Lab Sample ID:H0A310000 472

Method: EPA-19 TO-14

Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL

Date Received: 01/20/00

Work Order: D830V101

Date Extracted:01/31/00

Dilution factor: 1

Date Analyzed: 01/31/00

QC Batch: 0031472

Client Sample Id: INTRA-LAB BLANK

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	5.0	U
56-23-5	Carbon tetrachloride	0.20	U
67-66-3	Chloroform	0.20	U
75-09-2	Methylene chloride	0.20	U
127-18-4	Tetrachloroethene	0.20	U
79-01-6	Trichloroethene	0.20	U
78-93-3	2-Butanone (MEK)	0.50	U

BECHTEL HANFORD, INC.
CHECK SAMPLE COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) AIR

Lab Sample ID:H0A310000 472

Method: EPA-19 TO-14

Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL

Date Received: 01/20/00

Work Order: D830V102

Date Extracted:01/31/00

Dilution factor: 1

Date Analyzed: 01/31/00

QC Batch: 0031472

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) ppb(v	Q
79-01-6	Trichloroethene	10	
71-43-2	Benzene	11	
108-90-7	Chlorobenzene	10	
75-35-4	1,1-Dichloroethene	10	
108-88-3	Toluene	11	

BECHTEL HANFORD, INC.
METHOD BLANK COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) AIR

Lab Sample ID:H0B010000 313

Method: EPA-19 TO-14

Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL

Date Received: 01/28/00

Work Order: D842G101

Date Extracted:02/01/00

Dilution factor: 1

Date Analyzed: 02/01/00

QC Batch: 0032313

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg) ppb(v)	Q
67-64-1	Acetone	5.0	U
56-23-5	Carbon tetrachloride	0.20	U
67-66-3	Chloroform	0.20	U
75-09-2	Methylene chloride	0.20	U
127-18-4	Tetrachloroethene	0.20	U
79-01-6	Trichloroethene	0.20	U
78-93-3	2-Butanone (MEK)	0.50	U

BECHTEL HANFORD, INC.
CHECK SAMPLE COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) AIR

Lab Sample ID:H0B010000 313

Method: EPA-19 TO-14

Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL

Date Received: 01/28/00

Work Order: D842G102

Date Extracted:02/01/00

Dilution factor: 1

Date Analyzed: 02/01/00

QC Batch: 0032313

Client Sample Id: CHECK SAMPLE

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(ug/L or ug/kg) ppb(v	Q
79-01-6	Trichloroethene	9.8	
71-43-2	Benzene	10	
108-90-7	Chlorobenzene	10	
75-35-4	1,1-Dichloroethene	11	
108-88-3	Toluene	10	

140A200110

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						B99-009-06		Page 1 of 1			
Collector Nielson/Fahlberg		Company Contact K Maki		Telephone No. 373-4989		Project Coordinator TRENT, SJ		Price Code 9N		Data Turnaround 45 Days			
Project Designation 200-ZP-1 Operations On-Site and Off-Site Air Monitor Samp		Sampling Location 200 West		SAF No. B99-009		Air Quality <input type="checkbox"/>							
Ice Chest No. N/A		Field Logbook No. EL 1381-2		COA R20ZP1D760		Method of Shipment Hand Delivered							
Shipped To Quanterra Incorporated		Offsite Property No.				Bill of Lading/Air Bill No.							
POSSIBLE SAMPLE HAZARDS/REMARKS <i>556</i> <i>WA3026</i> Special Handling and/or Storage				Preservation	None								
				Type of Container	Summa Canister								
				No. of Container(s)	1								
				Volume	6L								
SAMPLE ANALYSIS				See item (1) in Special Instructions.									
Sample No.	Matrix *	Sample Date	Sample Time										
BOXCN7	Vapor	1/19/00	3:47	X									
BOXCN8	Vapor	1/19/00	0852	X									
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS					
Relinquished By <i>Kevin R. Nielson</i>		Date/Time 1-19-00		Received By <i>Kevin R. Nielson</i>		Date/Time 1-25-00		(1) VOA - T0-14 (2-Butanone, Acetone, Carbon tetrachloride, Chloroform, Methylenechloride, Tetrachloroethene, Trichloroethene) <i>Rec'd Temp Ambient</i> <i>Custody seals intact</i> <i>D.F. 1-20-00</i>					
Relinquished By <i>Kevin R. Nielson</i>		Date/Time 1-19-00		Received By <i>David D. Flores</i>		Date/Time 1-20-99 0930							
Relinquished By		Date/Time		Received By		Date/Time							
Relinquished By		Date/Time		Received By		Date/Time							
Relinquished By		Date/Time		Received By		Date/Time							
Relinquished By		Date/Time		Received By		Date/Time		Matrix *					
LABORATORY SECTION		Received By <i>David D. Flores</i>		Title <i>Res. Knox</i>		Date/Time 1-20-00 0930							
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time							

Invoice

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Quanterra Inc - Knoxville Lab
5815 Middlebrook Pike
Knoxville, TN 37921-5947
Tel: 423 5886401
Fax:

Number **14002341** Date **17 FEB 00**
Quanterra Project Number **HOA200110** Customer Number **127642**

Terms **NET 30 DAYS**
Customer Contact
SAMPLE RECEIVING DATE : 1/20/00
REPORT DATE : 2/17/00
Keith Maki

REMIT
TO

Quanterra Incorporated
P.O. Box 2473
Carol Stream, IL 60132-2473

Bill To: **Bechtel Hanford, Inc.**
3350 George Washington Way
Accounts Payable
Richland, WA 99352

Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

Line No.	Qty.	Matrix Code	Analysis Description	Unit Price	Extended Price
1	1		AIR, TO-14, Volatile Organics (Duplicate)		158.00
2	2		AIR, TO-14, Volatile Organics (LCS)	158.00	316.00
			Sample Subtotal		474.00
			CLIENT ID = BOXCN7		
			QUANTERRA SAMPLE ID = HOA200110-001		
3	1	AIR	AIR, TO-14, Volatile Organics		158.00
			Sample Subtotal		158.00
			CLIENT ID = BOXCN8		
			QUANTERRA SAMPLE ID = HOA200110-002		
4	1	AIR	AIR, TO-14, Volatile Organics		158.00
			Sample Subtotal		158.00

Please reference Invoice number when remitting.

Customer P.O. Number / Contract Number / Reference
MW6-SBB-A19981 (0000X-SC-G0063)/B99-009/B99-009
Quanterra Project Manager **MCK** Salesperson
Jamie A. McKinney

Sub Total
Tax
Total **790.00**

ORIGINAL

(Page 1 of 1)

H0A200110

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B99-009-06		Page 1 of 1			
Collector Nielson/Fahlberg		Company Contact K Maki		Telephone No. 373-4989		Project Coordinator TRENT, SJ		Price Code 9N Data Turnaround 45 Days			
Project Designation 200-ZP-1 Operations On-Site and Off-Site Air Monitor Samp		Sampling Location 200 West		SAF No. B99-009		Air Quality <input type="checkbox"/>					
Ice Chest No. N/A		Field Logbook No. EL 1381-2		COA R20ZPID760		Method of Shipment Hand Delivered					
Shipped To Quanterra Incorporated		Offsite Property No.				Bill of Lading/Air Bill No.					
POSSIBLE SAMPLE HAZARDS/REMARKS 5508 WA3026 Special Handling and/or Storage				Preservation	None						
				Type of Container	Summa Canister						
				No. of Container(s)	1						
				Volume	6L						
SAMPLE ANALYSIS					See item (1) in Special Instructions.						
Sample No.	Matrix *	Sample Date	Sample Time								
BOXCN7	Vapor	1/19/00	3:47	X							
BOXCN8	Vapor	1/19/00	3:52	X							
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS						
Relinquished By Nielson/Fahlberg		Date/Time 1-19-00		Received By Karin Hattenberg		Date/Time 1-19-00		(1) VOA - T0-14 (2-Butanone, Acetone, Carbon tetrachloride, Chloroform, Methylenechloride, Tetrachloroethene, Trichloroethene) Rec'd Temp Ambient Custody seals intact D.F. 1-20-00			
Relinquished By Karin Hattenberg		Date/Time 1-19-00		Received By Daniel D. Flores		Date/Time 1-20-00 0930					
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time		Matrix * S=Soil SE=Sediment SO=Solid S=Sludge W=Water G=Gas A=Air DS=Dry Solids DL=Dry Liquids T=Tree WL=Wipe L=Liquid V=Vegetation X=Other			
Relinquished By		Date/Time		Received By		Date/Time					
LABORATORY SECTION		Received By Daniel D. Flores		Title Res. Knox		Date/Time 1-20-00 0930					
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time					